

**What is claimed is:**

1. A method comprising:  
accessing patient medical information of a clinical information system with a medical device programmer;  
providing an interface by which a programming operator interacts with the medical device programmer to identify a programming parameter value based on the patient medical information; and  
programming a medical device with the medical device programmer in accordance with the programming parameter value.
2. The method of claim 1, wherein accessing the patient medical information comprises directly accessing the patient medical information of the clinical information system.
3. The method of claim 1, wherein accessing the patient medical information comprises accessing the patient medical information of the clinical information system via a gateway device that couples the clinical information system and the medical device programmer.
4. The method of claim 1, further comprising filtering the patient medical information to obtain a subset of the patient medical information from the clinical information system.
5. The method of claim 1, wherein accessing the patient medical information of the clinical information system comprises accessing the patient medical information of a plurality of clinical information systems.
6. The method of claim 1, further comprising presenting the patient medical information to the programming operator via the medical device programmer.

7. The method of claim 1, further comprising:  
automatically computing a programming parameter value based on the patient medical information; and  
displaying the computed programming parameter value to the programming operator via the medical device programmer.
8. The method of claim 7, wherein the programming operator identifies the programming parameter value by selecting the suggested programming parameter value.
9. The method of claim 1, further comprising initiating a programming session with the medical device to update at least one programming parameter value of the medical device based on the identified programming parameter value.
10. The method of claim 9, wherein initiating a programming session comprises initiating a remote programming session.
11. The method of claim 10, wherein initiating the programming session comprises sending instructions to an intermediary programming device via a network.
12. The method of claim 9, wherein initiating a programming session comprises initiating a programming session in a clinical setting.
13. The method of claim 1, further comprising:  
interrogating the medical device to extract information stored by the medical device; and  
sending the information extracted from the medical device to the clinical information system; and

storing the information within the clinical information system.

14. The method of claim 1, further comprising:
  - receiving input from the programming operator via the interface identifying administrative data; and
  - sending the administrative data to the clinical information system.
15. The method of claim 1, wherein the clinical information system comprises one of a healthcare information system, an electronic medical records system, a practice management system, a cardiovascular information system, a clinical laboratory information system, radiology information system, and a picture archiving and communication system.
16. The method of claim 1, wherein the medical device comprises one of an implantable pacemaker, an implantable cardioverter/defibrillator (ICD), an implantable pacemaker/cardioverter/defibrillator (PCD), a neurostimulation device, and a drug delivery device.
17. A system comprising:
  - a programmable medical device that delivers a therapy to a patient;
  - a clinical information system that stores patient medical information;
  - a medical device programmer that accesses patient medical information of the clinical information system and provides an interface by which a programming operator interacts with the medical device programmer to identify a programming parameter value based on the patient medical information
18. The system of claim 17, wherein the medical device programmer directly accesses the patient medical information of the clinical information system.

19. The system of claim 17, further comprising a gateway device the couples the medical device programmer and the clinical information system, wherein the medical device programmer accesses the patient medical information of the clinical information system via the gateway device.
20. The system of claim 19, wherein the gateway device filters the patient medical information to obtain a subset of the patient medical information from the clinical information system.
21. The system of claim 19, wherein the gateway device computes a programming parameter value based on the patient medical information.
22. The system of claim 17, wherein the medical device programmer filters the patient medical information to obtain a subset of the patient medical information of the clinical information system.
23. The system of claim 17, wherein the medical device programmer presents the patient medical information to the programming operator.
24. The system of claim 17, wherein the medical device programmer automatically computes a programming parameter value based on the patient medical information and suggests the programming parameter value to the programming operator.
25. The system of claim 17, wherein the medical device programmer initiates a programming session with the medical device to reprogram the medical device.
26. The system of claim 25, wherein the programming session comprises a remote programming session.

27. The system of claim 26, further comprising a remote programmer, wherein the medical device programmer sends instructions to the remote programmer via a network to initiate the remote communication session.

28. The system of claim 17, wherein the medical device programmer interrogates the medical device to extract information stored by the medical device and relays the information extracted from the medical device to the clinical information system or storage.

29. The system of claim 17, wherein the medical device programmer receives input from the programming operator via the interface identifying administrative data and sends the administrative data to the clinical information system.

30. The system of claim 29, wherein the clinical information system performs a management action in accordance with the administrative data.

31. The system of claim 30, wherein the clinical information system automatically generates at least one of a bill and a subsequent appointment.

32. The system of claim 17, wherein the clinical information system comprises one of a healthcare information system, an electronic medical records system, a practice management system, a cardiovascular information system, a clinical laboratory information system, radiology information system, and a picture archiving and communication system.

33. The system of claim 17, wherein the medical device comprises one of an implantable pacemaker, an implantable cardioverter/defibrillator (ICD), an implantable pacemaker/cardioverter/defibrillator (PCD), a neurostimulation device, and a drug delivery device.

34. A programming device comprising:  
a medical information interface by which the programming device accesses patient medical information of a clinical information system; and  
a user interface by which a programming operator interacts with the programming device to identify a programming parameter value based on the patient medical information.
35. The device of claim 34, wherein the medical information interface accesses patient medical information of the clinical information system via a gateway device coupling the medical device programmer and the clinical information system.
36. The device of claim 35, wherein the programming device filters the patient medical information to obtain a subset of the patient medical information from the clinical information system.
37. The device of claim 34, wherein the user interface comprises a display monitor and the programming device displays the patient medical information to the programming operator via the display monitor.
38. The device of claim 34, further comprising a parameter computing unit that computes a programming parameter value based on the patient medical information, wherein the programming device displays the computed programming parameter value to the programming operator via the user interface.
39. The device of claim 34, further comprising a wireless telemetry module and an antenna, wherein the programming device initiates a programming session with the medical device to reprogram the programming parameters of the medical device.

40. The device of claim 34, further comprising a communication unit, wherein the programming device relays instructions via the communication unit and a network to a remote medical device programmer that initiates the programming session

41. The device of claim 34, wherein the medical device comprises one of an implantable pacemaker, an implantable cardioverter/defibrillator (ICD), an implantable pacemaker/cardioverter/defibrillator (PCD), a neurostimulation device, and a drug delivery device.

42. A computer-readable medium comprising instructions to cause a processor to:

access patient medical information of a clinical information system with a medical device programmer;

provide an interface by which a programming operator interacts with the medical device programmer to identify a programming parameter value based on the patient medical information; and

program a medical device with the medical device programmer in accordance with the programming parameter value.

43. The computer-readable medium of claim 42, wherein the instructions cause the processor to directly access the patient medical information of the clinical information system.

44. The computer-readable medium of claim 42, wherein the instructions cause the processor to access the patient medical information of the clinical information system via a gateway device that couples the clinical information system and the medical device programmer.

45. The computer-readable medium of claim 42, wherein the instructions cause the processor to filter the patient medical information to obtain a subset of the patient medical information from the clinical information system.

46. The computer-readable medium of claim 42, wherein the instructions cause the processor to access the patient medical information of a plurality of clinical information systems.

47. The computer-readable medium of claim 42, wherein the instructions cause the processor to present the patient medical information to the programming operator via the medical device programmer.

48. The computer-readable medium of claim 42, wherein the instructions cause the processor to:

- automatically compute a programming parameter value based on the patient medical information; and
- display the computed programming parameter value to the programming operator via the medical device programmer.

49. The computer-readable medium of claim 42, wherein the instructions cause the processor to:

- interrogate the medical device to extract information stored by the medical device; and
- send the information extracted from the medical device to the clinical information system; and
- store the information within the clinical information system.

50. The computer-readable medium of claim 42, wherein the instructions cause the processor to:



receive input from the programming operator via the interface identifying administrative data; and

send the administrative data to the clinical information system.

51. The computer-readable medium of claim 42, wherein the clinical information system comprises one of a healthcare information system, an electronic medical records system, a practice management system, a cardiovascular information system, a clinical laboratory information system, radiology information system, and a picture archiving and communication system.

52. The computer-readable medium of claim 42, wherein the medical device comprises one of an implantable pacemaker, an implantable cardioverter/defibrillator (ICD), an implantable pacemaker/cardioverter/defibrillator (PCD), a neurostimulation device, and a drug delivery device.